| Flight-Testing Newton's Laws | | | |
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| **2007 Mathematics** | | | |
| **Next Generation Sunshine State Standards** | | | |
| **Florida Mathematics** | | | |
| **Grades 9-12 (Algebra)** | | | |
| **Activity/Lesson** | **State** | **Standards** | |
| Session-10 (1-5) | FL | MA.9-12.MA.912.A.2.13 | Solve real-world problems involving relations and functions. |
| Session-10 (1-5) | FL | MA.9-12.MA.912.A.3.3 | Solve literal equations for a specified variable. |
| Session-10 (1-5) | FL | MA.9-12.MA.912.A.3.5 | Symbolically represent and solve multi-step and real-world applications that involve linear equations and inequalities. |
| Session-10 (1-5) | FL | MA.9-12.MA.912.A.3.6 | Solve and graph the solutions of absolute value equations and inequalities with one variable. |
| Session-9 (1-7) | FL | MA.9-12.MA.912.A.3.3 | Solve literal equations for a specified variable. |
| Session-9 (1-7) | FL | MA.9-12.MA.912.A.3.5 | Symbolically represent and solve multi-step and real-world applications that involve linear equations and inequalities. |
| Session-9 (1-7) | FL | MA.9-12.MA.912.A.3.15 | Solve real-world problems involving systems of linear equations and inequalities in two and three variables. |
| Session-9 (1-7) | FL | MA.9-12.MA.912.A.5.7 | Solve real-world problems involving rational equations (mixture, distance, work, interest, and ratio). |
| Session-9 (1-7) | FL | MA.9-12.MA.912.A.7.8 | Use quadratic equations to solve real-world problems. |

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| **Grades 9-12 (Calculus)** | | | |
| **Activity/Lesson** | **State** | **Standards** | |
| Session-1 (1-17) | FL | MA.9-12.MA.912.C.3.10 | Find the velocity and acceleration of a particle moving in a straight line. |
| Session-1 (1-17) | FL | MA.9-12.MA.912.C.5.1 | Find specific antiderivatives using initial conditions, including finding velocity functions from acceleration functions, finding position functions from velocity functions, and solving applications related to motion along a line. |

| Session-3 (1-6) | FL | MA.9-12.MA.912.C.3.9 | Find average and instantaneous rates of change. Understand the instantaneous rate of change as the limit of the average rate of change. Interpret a derivative as a rate of change in applications, including velocity, speed, and acceleration. |
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| Session-3 (1-6) | FL | MA.9-12.MA.912.C.3.10 | Find the velocity and acceleration of a particle moving in a straight line. |
| Session-3 (1-6) | FL | MA.9-12.MA.912.C.5.1 | Find specific antiderivatives using initial conditions, including finding velocity functions from acceleration functions, finding position functions from velocity functions, and solving applications related to motion along a line. |
| Session-9 (1-7) | FL | MA.9-12.MA.912.G.6.5 | Solve real-world problems using measures of circumference, arc length, and areas of circles and sectors. |
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| **Flight-Testing Newton's Laws** | | | |
| **2007 Mathematics** | | | |
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| **Grades 9-12 (Trigonometry)** | | | |
| **Activity/Lesson** | **State** | **Standards** | |
| Session-10 (1-5) | FL | MA.9-12.MA.912.T.1.8 | Solve real-world problems involving applications of trigonometric functions using graphing technology when appropriate. |
| Session-1 (1-17) | FL | MA.9-12.MA.912.T.2.3 | Apply the laws of sines and cosines to solve real-world problems using technology. |
| Session-1 (1-17) | FL | MA.9-12.MA.912.T.3.4 | Solve trigonometric equations and real-world problems involving applications of trigonometric equations using technology when appropriate. |